

REMARKS

THE EXAMINER HAS NOT RESPONDED TO APPLICANTS' TRAVERSAL OF THE ELECTION OF SPECIES REQUIREMENT AS REQUIRED BY MPEP §821.01

An election of species requirement was made in this application in the Office Action mailed November 27, 2006. Applicants traversed this requirement in the response to the requirement filed December 27, 2006, for the reason, essentially, that the Examiner had not applied unity of invention practice to the claims.

In the Office Action dated March 23, 2007, the Examiner maintained the election of species requirement but did not reply to the applicants' traversal of the requirement. In the response filed June 19, 2007, to the Action of March 23, 2007, applicants again traversed the election of species requirement and provided reasons and arguments explaining why the requirement was improper and argued that the Office had not properly responded to applicants' traversal of the requirement.

In the present Action the Examiner has still not properly responded to applicants' traversal. The Examiner states only:

Note that the search is based on different chemical structure of each species, and in conditions if the claims in the elected species are in condition for allowance then the search is expanded to non-elected species.

This statement assumes that the requirement is correct and is not a "reply to the reasons and arguments advanced by applicant in the traverse" as required by MPEP §821.01.

Therefore, applicants request that the Examiner either properly reply to the traversal of the election of species requirement as required under the provisions of MPEP §821.01 or withdraw the requirement.

**THE EXAMINER HAS IMPROPERLY WITHDRAWN CLAIM 2 FROM CONSIDERATION**

Notwithstanding the impropriety of the election of species requirement, applicants properly elected, as the phosphorus-containing residue having a bicycloalkyl structure recited in claim 1, the species identified by the Examiner as species (1) in the Action of November 27, 2006, i.e., "a residue from phosphonic acid". Claim 2, in its original dependent form, depends on claim 1 and limits the phosphorus-containing residue having a bicycloalkyl structure to that represented by general formula (2). The phosphorus-containing residue having a bicycloalkyl structure represented by general formula (2) is, when X is oxygen, a phosphonic acid residue having a bicycloalkyl structure and reads on the elected species.

The only issue to be considered when determining whether or not a claim should receive an action on the merits or be withdrawn

from consideration as reading on a non-elected species is whether the claim is readable on the elected species? If the claim is readable on the elected species, it must be examined and cannot be withdrawn from consideration. Claim 2 is readable on the elected species and, therefore, must be examined.

In the present Action the Examiner states: "[h]owever, said phosphorus containing residue in claim 1 does not necessarily have the claimed structure (2). This statement is wrong and is totally irrelevant to the issue that the Examiner must consider, i.e., whether claim 2 is readable on the elected species. By definition, the phosphorus-containing residue having a bicycloalkyl structure represented by general formula (2) as recited in claim 2 is a phosphorus-containing residue having a bicycloalkyl structure. Moreover, the phosphorus-containing residue having a bicycloalkyl structure represented by general formula (2) includes within its scope a phosphonic acid residue having a bicycloalkyl structure. Therefore, claim 2 is readable on the elected species.

Moreover, evidence that claim 2 should have been included in the examined claims is the fact that the reasoning provided by the Examiner as supporting his 35 U.S.C. § 102(b) and, alternative, 35 U.S.C. § 103(a) rejections in the Final Action applies to claim 2 as well as to claim 1. These rejections are based on a position of

the Examiner that EP 1270646 discloses or, alternatively, suggests a resin composition comprising a phosphonic acid residue having a bicycloalkyl structure. This is a structure within the scope of claim 2.

For the above reasons, withdrawal of claim 2 from further consideration in the present Action is improper and examination of the patentability of the subject matter of claim 2 is in order. In this regard, in lieu of maintaining claim 2 in the application and in order to simplify the issues for appeal, applicants have amended claim 1 to correspond to claim 2. Entry of the amendment to claim 1 and consideration of the patentability of claim 1 and the claims that depend thereon under 35 U.S.C. § 102 and 35 U.S.C. § 103(a) are in order and are requested.

EP 1 270 646 DOES NOT PLACE THE INVENTION OF THE CLAIMS IN THE PRESENT APPLICATION IN THE HANDS OF THE PUBLIC AS REQUIRED TO SUPPORT A CASE OF ANTICIPATION UNDER 35 U.S.C. § 102 AND DOES NOT SUPPORT A PRIMA FACIE CASE OF OBVIOUSNESS OF THE CLAIMS UNDER 35 U.S.C. § 103(a)

Referring now to the rejections in the present Action, the Examiner has maintained the rejection of claims 1 and 8 to 12 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over EP 1 270 646 (hereinafter: "EP '646").

The Examiner's reasons for maintaining the rejections are stated to be the "reasons as stated in the last office action" (Final Action, page 2, line 5 from the bottom of the page) and "that the reference does disclose in paragraph [0013], page 5, line 51 onto page 6, line 32) a variety of components as R1 in that the claimed phosphorus containing residue having a bicycloalkyl structure is included." (Final Action, page 3, lines 1-3).

The reason for rejection explained on page 3 of the Action and quoted above suggests that the Examiner is taking the position that a phosphonic acid residue having a bicycloalkyl structure is specifically disclosed in EP '646 on pages 5 and 6. If this is a correct interpretation of the Examiner's position, the position is inconsistent with the reasons for rejection stated in the previous action and is not correct.

In the previous action the Examiner stated that EP '646 "neither disclose [sic, discloses] that the phosphorus containing residue having a bicycloalkyl structure nor the claimed characteristic represent by the equations in claims 8-9." (Action dated March 23, 2007, page 2, lines 1-3 from the bottom of the page). If EP '646 does not disclose the phosphorus containing residue having a bicycloalkyl structure, the components disclosed as R1 on page 5, line 51, to page 6, line 32, cannot at the same

time include the claimed phosphorus containing residue having a bicycloalkyl structure. Moreover, the components disclosed as R1 on page 5, line 51, to page 6, line 32, do not, in fact, include any phosphorus containing residues having a bicycloalkyl structure.

As noted in the response to the previous action, a disclosure of a genus is not a disclosure of a species and cannot properly support anticipation under 35 U.S.C. § 102. As noted by the United States Court of Appeals for the Federal Circuit in *Impax Laboratories Inc. v. Aventis Pharmaceuticals Inc.*, 81 USPQ2d 1001, 1013 (Fed. Cir. 2006):

"When a reference discloses a class of compounds, i.e., a genus, a person of ordinary skill in the art should be able to 'at once envisage each member of th[e] ... class' for the individual compounds, i.e., species, to be enabled. *In re Petering*, 301 F.2d 676, 681 [133 USPQ 275] (C.C.P.A. 1962). If the members cannot be envisioned, the reference does not disclose the species and the reference is not enabling."

In the present case, a person of ordinary skill in the art cannot at once envision a phosphorus-containing residue having a bicycloalkyl structure represented by formula (2) from the disclosure of an "organic group" or from the examples of organic groups in the paragraph bridging pages 5 and 6 in EP '646. Therefore, EP '646 does not disclose the phosphorus-containing residue having a bicycloalkyl structure represented by formula (2)

and the rejection of the claims for anticipation under 35 U.S.C. 102(b) based on EP '646 must fail.

Second, there is nothing in EP '646 to direct a person of ordinary skill in the art to the selection of a phosphorus-containing residue having a bicycloalkyl structure represented by formula (2) as the organic group of the phosphonic acid residue because there is no basis in EP '646 or other prior art to support a reasonable expectation of similar properties for the use of a bicycloalkyl group in EP '646. For this reason alone, the 35 U.S.C. § 103(a) rejection is improper.

If the Examiner maintains the 35 U.S.C. § 102(b) or, alternative, 35 U.S.C. § 103(a) rejection, he is requested to identify each specific phosphorus-containing residue having a bicycloalkyl structure disclosed in EP '646 and/or to explain where and how a phosphorus-containing residue having a bicycloalkyl structure and, more specifically, a phosphonic acid residue having a bicycloalkyl structure represented by formula (2) is suggested by EP '646.

Moreover, as described on page 3, lines 16 to 19, of the specification of the present application, the object of the present invention is to provide a transparent resin having both a high refractive index and an optically low dispersion. Herein,

optically low dispersion is the same as having a high Abbe number. In other words, the object of the present invention is to provide a transparent resin having a high refractive index and a high Abbe number. However, as described in the last paragraph of page 21 of the specification, there is usually a negative correlation between Abbe number and refractive index, so that it is difficult to obtain a simultaneous improvement of both properties.

Additionally, as described in the paragraph bridging pages 5 to 6 of the specification, compounds having a group such as benzene or naphthalene ring have a high refractive index but a low Abbe number. Applicants found that a bicycloalkyl structure is effective for exhibiting an unexpectedly high refractive index and a high Abbe number for the reason, it is believed, it contains a large number of SP<sup>3</sup> carbons in a small space. Therefore, the resin of the present application has a high Abbe number while maintaining a refractive index equal to, or higher than, that of conventional polycarbonate.

The resins in EP '646 correspond to the resins of the Comparative Examples of the specification of the present application, which do not include a phosphorus-containing residue having a bicycloalkyl structure. As described in the last paragraph of page 33 of the specification: "[a]s can be seen from



Comparative Examples 1 to 3, the highly refractive, thermoplastic resins such as conventional polyphosphate resin or modified polycarbonate resin have an Abbe number of less than 32 or a refractive index of less than 1.58, and are unsatisfactory for optical uses, particularly in eyeglass lenses. On the other hand, it appears that the resins in Examples 1 to 16 are excellent thermoplastic optical resins having both high Abbe number and high refractive index."

The descriptions and data in the present application demonstrate unexpected properties of the resin of the present invention and rebut any *prima facie* obviousness considered by the Office to be supported by EP '646. For this reason also the 35 U.S.C. § 103(a) rejection is also improper.

Removal of the 35 U.S.C. 102(b) and 103(a) rejections of the claims is in order and is respectfully requested.

**U.S. PATENT NO. 6,750,313 DOES NOT SUPPORT THE ODP REJECTION**

Claims 1 and 8 to 12 are again rejected on the ground of nonstatutory obviousness-type double patenting ("ODP") as being unpatentable over claims 1 and 3 to 5 of U.S. Patent No. 6,750,313 (hereinafter "US '313"). US '313 is the corresponding U.S. publication of EP '646. The position of the Office is that the claims of US '313 and the claims of the present application are not

patentably distinct because the bicycloalkyl group of the present application is "included" in the broad organic group of the US '313.

Applicants respectfully traverse the ODP rejection. Claims 1 and 8 to 12 of the present application are patentably distinct from and unobvious over claims 1 and 3 to 5 of US '313 for the same reasons as explained above that the claims are patentably distinct from and unobvious over EP '646. Claims 1 and 3 to 5 of US '313 do not recite (or include within their scope) a phosphorus-containing residue having a bicycloalkyl structure of formula (2) and a phosphorus-containing residue having a bicycloalkyl structure of formula (2) would not be obvious to a person of ordinary skill in the art from these claims, alone or in combination with the prior art.

Removal of the ODP rejection of the claims is also believed to be in order and is respectfully requested.

The foregoing is believed to be a complete and proper response to the Office Action dated August 10, 2007, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

PATENT APPLN. NO. 10/558,275  
RESPONSE UNDER 37 C.F.R. § 1.116

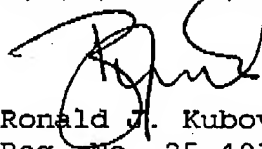
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In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

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